

REMARKS

Claims 22-27 are amended. Claims 64-75 are added. Claims 21-28 and 64-75 are in the application for consideration.

The title is amended to be more descriptive of the claimed subject matter. Further, the abstract is amended to also be more descriptive of the claimed subject matter. The specification is also amended.

Claims 24-27 stand rejected under 35 U.S.C. §112 as being indefinite. Claims 24-26 are rejected based upon Applicant's use of the word "less". Applicant disagrees. The Examiner simply states that Applicant's use of "less" is indefinite. This is merely a conclusion, not rationale for a rejection. Use of "less" in claims is common, and is not indefinite. Applicant respectfully asserts that the use of "less" in its claims is clearly understandable to a person of skill in the art as not requiring a single absolute thickness, but rather that an appropriate thickness less than or equal to the respective 50 Angstroms and 60 Angstroms is contemplated. The Examiner is directed to M.P.E.P. §2173.05(b), "Relative Terminology", for support of Applicant's position. Further, the undersigned notes that patents have issued in this application's family which have the word "less" in the claims. Accordingly, withdrawal of this rejection is warranted and requested.

Claim 28 is also rejected under 35 U.S.C. §112 due to Applicant's use of the word "substantially" and the phrase "substantially amorphous". The Examiner simply states that Applicant's use of "substantially" is unclear.

Again, this is merely a conclusion, not rationale for a rejection. Use of "substantially" in claims is common, and not indefinite. Applicant's use of "substantially amorphous" is further inherently clear at least in part because Applicant defined the same in its specification. *See* p.5, ln.22 – p.6, ln.1. Accordingly, withdrawal of this rejection is requested.

Claims 21-23 and 28 stand rejected under 35 U.S.C. §103(a) as being unpatentable over a combination of Tsu et al. in view of Forbes et al. The undersigned notes no prior art rejection is stated of claims 24-27 on page 3 of the Office Action, although a rationale is provided for the rejection of such claims on page 4. Clarification is requested if the Examiner's next action is not a Notice Of Allowance.

The '775 Forbes et al. patent is not prior art to this application. Specifically, this application was filed after November 29, 1999. Accordingly, the provisions of 35 U.S.C. §103(c) apply. This application also has a priority filing date of February 10, 1999. Accordingly, the application which became the '775 Forbes et al. patent and the priority application hereto were co-pending. The cited '775 patent is understood to only qualify as prior art under one or more subsections of (e), (f) and (g) of §102 of 35 U.S.C. This application and the application which became the '775 Forbes et al. patent are assigned to Micron Technology, Inc. The undersigned hereby asserts that the subject matter that became the '775 patent and the claimed invention herein were, at the time the invention herein was made, owned by Micron Technology or subject to an obligation

of assignment to Micron Technology. Accordingly, the Forbes et al. patent is not prior art to this application, and the rejection must be withdrawn.

No admission is made regarding the propriety of the Examiner's rejection, even were the Forbes et al. subject matter prior art to this application.

New claims 64-75 are added. Claims 64-69 are patterned after claims 22-27, but depend from claim 28. Claims 70-73 are patterned after claims 26 and 27, but change the thickness to be less than or equal to 50 Angstroms. Claims 74 and 75 recite that the bit lines are received elevationally outward of the memory cell storage capacitors, and are clearly supported by Applicant's application as-filed.

This application is believed to be in immediate condition for allowance, and action to that end is requested

Respectfully submitted,

Dated: 12 - 30 - 02

By


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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application Serial No. 10/041,896
Filing Date January 7, 2002
Inventor Brenda D. Kraus et al.
Assignee Micron Technology, Inc.
Group Art Unit 2813
Examiner Yennhu B. Huynh
Attorney's Docket No. Mi22-1859
Title: DRAM Circuitry Having Storage Capacitors Which Include Capacitor Dielectric Regions Comprising Aluminum Nitride (as Amended)

VERSION WITH MARKINGS TO SHOW CHANGES MADE
ACCOMPANYING RESPONSE TO OCTOBER 7, 2002 OFFICE ACTION

In the Title

The title has been replaced.

In the Specification

The replacement specification paragraphs incorporate the following amendments. Underlines indicate insertions and ~~strikeouts~~ indicate deletions.

The paragraph beginning at line 23 on page 7 has been amended as follows:

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Other aspects of the invention are described with reference to Figs. 2 through 4. Fig. 2 illustrates a field emission device in the form of field emission display 40 in fabrication. In the depicted example, such comprises an electron emitter substrate 42 formed of a glass plate 44 having a first semiconductive material 46 formed thereover. Semiconductive material 46 might comprise either a p-type doped or an n-type doped semiconductive material (such as, for example, monocrystalline silicon). Emitters ~~54~~ 48 are provided in electrical connection with layer 46, and preferably comprise a second semiconductive material, for example doped polycrystalline silicon. Exemplary dielectric regions 50, such as borophosphosilicate glass, are provided over material 46 and intermediate emitters 48. An electrically conductive extraction grid 52 is provided over dielectric material 50 and accordingly is outwardly of and spaced from emitters 48.

In the Abstract

The Abstract has been replaced.

In the Claims

The claims have been amended as follows. Underlines indicate insertions and ~~strikeouts~~ indicate deletions.

22. (Amended) The circuitry of ~~Claim~~ claim 21 wherein the region contacts each of the first and second capacitor electrodes and consists essentially of aluminum nitride.

23. (Amended) The circuitry of ~~Claim~~ claim 21 wherein the region contacts each of the first and second capacitor electrodes and consists essentially of aluminum nitride and native oxide formed on at least one of the first and second capacitor electrodes.

24. (Amended) The circuitry of ~~Claim~~ claim 21 wherein the region contacts each of the first and second capacitor electrodes and has a thickness less than or equal to 60 Angstroms.

25. (Amended) The circuitry of ~~Claim~~ claim 21 wherein the region contacts each of the first and second capacitor electrodes and has a thickness less than or equal to 50 Angstroms.

26. (Amended) The circuitry of ~~Claim~~ claim 21 wherein the region contacts each of the first and second capacitor electrodes, consists essentially of aluminum nitride, and has a thickness less than or equal to 60 Angstroms.

27. (Amended) The circuitry of ~~Claim~~ claim 21 wherein the region contacts each of the first and second capacitor electrodes, consists essentially of aluminum nitride and native oxide formed on at least one of the first and second capacitor electrodes, and has a thickness less than or equal to 60 Angstroms.

Claims 64-75 have been added.

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